

wherein the magnetic shield member is placed above the transmission coil when the direction of wireless transmission of the magnetic fields is toward the inside of the front cover.

**10.** The accessory apparatus of claim **1**, further comprising:

a printed circuit board in the front cover, wherein the wireless power control processor and the DC-AC converter are mounted on the printed circuit board.

**11.** The accessory apparatus of claim **10**, further comprising:

a heat dissipation member in the front cover, wherein the heat dissipation member is configured to dissipate heat generated by the printed circuit board.

**12.** An accessory apparatus comprising:

a first cover to cover or expose a front face of a mobile device;

a second cover comprising a space to accommodate the mobile device;

a coupling member configured to link the first cover and the second cover; and

a wireless power transmitter circuit placed in the first cover and configured to wirelessly transmit power through magnetic fields generated by alternating current (AC) power that is obtained via direct current-AC (DC-AC) conversion from DC power of a battery of the mobile device accommodated in the second cover.

**13.** The accessory apparatus of claim **12**, wherein the wireless power transmitter circuit comprises:

a wireless power control processor;

a connector configured to electrically connect to the battery of the mobile device;

a DC-AC converter configured to convert DC power from the connector into AC power; and

a transmission coil configured to wirelessly transmit power to an external device through magnetic fields generated by the AC power.

**14.** An accessory apparatus comprising:

a first cover configured to cover or expose a front face of a mobile device;

a second cover comprising a space to accommodate the mobile device;

a coupling member configured to link the first cover and the second cover;

a wireless power receiver circuit placed in the second cover and configured to wirelessly receive power from the mobile device accommodated in the second cover; and

a wireless power transmitter circuit placed in the first cover and configured to wirelessly transmit power through magnetic fields generated by alternating cur-

rent (AC) power that is obtained via direct current-AC (DC-AC) conversion from DC power of the wireless power receiver circuit placed in the second cover.

**15.** The accessory apparatus of claim **14**, wherein the wireless power receiver circuit comprises:

a wireless power reception control processor;

a reception coil configured to wirelessly receive power from a transmission coil of the mobile device;

an AC-DC converter configured to convert AC power from the reception coil into DC power; and

a regulator configured to adjust the voltage of the DC power to a voltage suitable for charging at the accessory apparatus.

**16.** The accessory apparatus of claim **15**, wherein the wireless power transmitter circuit comprises:

a wireless power transmission control processor;

a DC-AC converter configured to convert DC power from the regulator into AC power; and

a transmission coil configured to wirelessly transmit power through magnetic fields generated by the AC power.

**17.** The accessory apparatus of claim **16**, wherein the transmission coil is further arranged in the front cover to wirelessly transmit the magnetic fields towards an external device.

**18.** The accessory apparatus of claim **16**, wherein the transmission coil is further arranged in the front cover to wirelessly transmit the magnetic fields towards an external device through at least one of an outside of the front cover or an inside of the front cover.

**19.** The accessory apparatus of claim **14**, further comprising:

A wireless power control processor configured to control the wireless power receiver circuit and the wireless power transmitter circuit, and

a printed circuit board on which the wireless power control processor is mounted, wherein the reception coil of the wireless power receiver circuit and the transmission coil of the wireless power transmitter circuit are electrically connected to the printed circuit board.

**20.** The accessory apparatus of claim **16**,

wherein the wireless power transmitter circuit further comprises a magnetic shield member, and

wherein the magnetic shield member is placed adjacent to the transmission coil in accordance with the direction of wireless transmission of the magnetic fields.

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